

International Conference on Solidification Science & Processing (ICSSP9)
December 5-8, 2026, IIT Hyderabad

Program Schedule

Day 1: December 5, 2026

			Speaker	Affiliation	Title of the Talk
08.00	09.00	Registration			
09.00	09.15	Inauguration			
09.15	10.50	Session 1: Chair:			
09.15	09.40	KN-1	C. Berndt	Swinburne University of Technology	Progress in High Entropy Alloys and their Processing via Surface Engineering
09.40	10.05	KN-2	D. Banerjee	IISc Bangalore	Additive Processes for High Temperature Materials
10.05	10.20	IS-1	Gaurav Kumar	NTU	Advanced characterization and predictive modelling of hydrogen-induced fatigue crack growth acceleration in pipeline steels
10.20	10.35	IS-2	Jayanta Das	IIT KGP	Phase Selection and Interface-Governed Eutectic Microstructure Evolution in CoCrFeNi-Base High-Entropy Alloys
10.35	10.50	IS-3	J Basu	IIT BHU	Segregation, composition modulation, intercalation, strain minimization and oriented growth in high entropy materials
10.50	11.20	Tea/Coffee			
11.20	13.10	Session 2: Chair:			
11.20	11.45	KN-3	A.L. Greer	University of Cambridge	Processing Route to Nanoporous Titanium with Tailored Properties
11.45	12.10	KN-4	G.K. Dey	BARC	Effect of the Structure of the Liquid on Crystal Nucleation and Growth
12.10	12.25	IS-4	Sabine Bottin-Rousseau	Sorbonne Université	Pattern Formation during Directional Melting of Lamellar Eutectics
12.25	12.40	IS-5	L Bichler	UBC	Correlation of Microstructural Evolution with Hardness and Electrical

					Conductivity in Cast B319 Aluminum Alloy During Solution Heat Treatment and Natural Aging
12.40	12.55	IS-6	A K Prasad Rao	GITAM Vizag	Undiluted Recycling of Al-Si alloys pushing the Fe-impurity limits: Scrap to Product
12.55	14.00	Lunch			
14.00	15.35	Session 3: Chair:			
14.00	14.25	KN-5	Gerhard Wilde	University of Muenster	TBD
14.25	14.50	KN-6	D.H. Kim	Yonsei University	Rapid Solidification of Phase-Separating Ni-Ti-X-Gd (X=Nb, Zr, Al, Si) Alloys for the Synthesis of Shape Memory Alloy Nanostructures via Selective Leaching
14.50	15.05	IS-7	Shantanu Madge	IIT Jammu	Brittle-to-Plastic Transition in Bulk Metallic Glasses
15.05	15.20	IS-8	Akash Pakanati	Norsk Hydro	Application of numerical models to improve process and product quality in aluminium cast houses
15.20	15.35	IS-9	Yoshida Shuhei	Kyoto University	Solidification-kinetics-driven coupled selection of eutectic morphology and orientation relationship in AlCoCrFeNi _{2.1} high-entropy alloy
15.35	16.00	Tea/Coffee			
16.00	17.35	Session 4: Chair:			
16.00	16.25	KN-7	D. Miracle	AFRL	TBD
16.25	16.50	KN-8	B.K. Dhindaw	IIT Kharagpur (Retd.)	Substrate-directed Atomic Stacking Model for Predicting Metal-oxide nucleation Interfaces
16.50	17.05	IS-10	Andrew Ang	Swinburne University of Technology	Eutectic Ti-Based High-Entropy Alloy Powder: A Sovereign Alternative to Hard Chrome and Tungsten-Carbide Coatings
17.05	17.20	IS-11	Kenta Yamanaka	Tohoku University	Tailoring solidification microstructures for crack mitigation in pure tungsten during electron beam powder bed fusion
17.20	17.35	IS-12	P Ramasamy	Erich Schmid Institute	Unveiling the Influence of Heat Treatment on the Mechanical Performance of LPBF-Processed Ti-5553 Alloy
18.30	20.00	Cultural Program			
20.00	21.30	Dinner			

Day 2: December 6, 2026

			Speaker	Affiliation	Title of the Talk
09.00	10.35	Session 5: Chair:			
09.00	09.25	KN-9	B.S. Murty	IIT Hyderabad	TBD
09.25	09.50	KN-10	M. Zhang	University of Queensland	Roles of inoculation treatment in additively manufactured steels
09.50	10.05	IS-13	Jinwoo Hwang	Ohio State University	Machine-Learning-Assisted 4D-STEM of Composition-Dependent Medium-Range Order in Metallic Glasses
10.05	10.20	IS-14	K G Pradeep	IIT Madras	Correlative Transmission Kikuchi Diffraction analysis of super saturated solid solutions in additively manufactured Cu based alloys
10.20	10.35	IS-15	Raman Singh	Monash University	Defects in Additively Manufactured Metallic Materials: Their Overlooked Roles in Corrosion and Stress Corrosion Cracking
10.35	11.00	Tea/Coffee			
11.00	13.00	Session 6: Chair:			
11.00	11.25	KN-11	SVS Narayana Murty	MIDHANI	Role of solidification microstructure on mechanical properties of superalloys and special steels.
11.25	11.50	KN-12	P. Dutta	IISc Bangalore	Multiscale Modelling of Laser Direct Energy Deposition-based Additive Manufacturing Process
11.50	12.15	KN-13	Eun Soo Park	Seoul National University, South Korea	Bi-continuous W-rich Refractory High Entropy Alloy-Cu Composite: Toward material innovation of nuclear reactor coolant system
12.15	12.30	IS-16	K R Ravi	IIT Jodhpur	Real-Time Monitoring of Solidification-Driven Hot Cracking in Directed Energy Deposition of IN713: Correlation with Melt-Pool Regime, Cooling Rate, and Kou Criterion Using a Multi-Sensor Approach
12.30	12.45	IS-17	Suresh	Swinburne University of Technology	Thermally Driven Microstructural Evolution and Alloy Formation in Cold Spray Additive Manufacturing

12.45	13.00	IS-18	Ajay Kumar	IIT Tirupati	Process Innovation and Microstructure Engineering for High-Integrity Ti-6Al-4V Components by Directed Energy Deposition and Wire Arc Additive Manufacturing
13.00	14.00	Lunch			
14.00	15.35	Session 7: Chair:			
14.00	14.25	KN-14	J. Eckert	University of Leoben	Rapid Solidification Through Additive Manufacturing: Case Studies for Processing of Advanced Materials
14.25	14.50	KN-15	I. Manna	BIT Mesra	Novel Microstructural Evolution by Rapid Solidification in Laser Materials Processing
14.50	15.05	IS-19	K G Prashanth	NTNU	Correlation of Microstructural Evolution with Hardness and Electrical Conductivity in Cast B319 Aluminum Alloy During Solution Heat Treatment and Natural Aging
15.05	15.20	IS-20	Vikas Srivastava	NML Jamshedpur	Microstructural Control, Thermal Dynamics, and Predictive Modeling in Wire-Arc Additive Manufacturing of Steels
15.20	15.35	IS-21	A Elsayed	University of Guelph	Aluminum and Magnesium Alloys with High Thermal/Electrical Conductivity for Electrified Powertrains Produced Using Solidification Processes
15.35	16.00	Tea/Coffee			
16.00	17.20	Session 8: Chair:			
16.00	16.25	KN-16	Markus Apel	E.V. Aachen	Phase field simulations to elucidate the solidification mode in wire-based additive manufacturing of the stainless steel 316L
16.25	16.50	KN-17	G. Phani kumar	IIT Madras	TBD
16.50	17.05	IS-22	Damien Turret	IMDEA	Oscillatory banding in rapid alloy solidification: from additive manufacturing observations to predictive phase-field modeling
17.05	17.20	IS-23	Abhik Choudhury	IISc Bangalore	Through process modeling of single-crystalline Ni-based superalloys manufactured through Bridgman and additive routes
17.30	19.00	Poster Session			
20.00	21.30	Dinner			

Day 3: December 7, 2026

			Speaker	Affiliation	Title of the Talk
09.00	11.35	Session 9: Chair:			
09.00	09.25	KN-18	M. Plapp	École Polytechnique	Phase-field simulations and theoretical description of peritectic coupled growth
09.25	09.50	KN-19	N.K. Mukhopadhyay	IIT BHU	Multiscale B2 Precipitation for Enhanced Strength–Ductility Synergy in an Fe-Rich Medium-Entropy Alloy
09.50	10.15	KN-20	T.P.D. Rajan	MNIT Jaipur	Near Net Shape Manufacturing of High strength Aluminium Alloy and Composite Components by Squeeze Casting Processes
10.15	10.40	KN-21	S. Suwas	IISc Bangalore	Evolution of Texture and Microstructure in Additively Manufactured Materials: A Case Study on IN718
10.40	10.55	IS-24	Saswata Bhattacharya	IIT Hyderabad	Rapid Solidification during Laser Thermal Annealing of Semiconductors: Multiscale Modelling of Interface Anisotropy and Dopant Trapping
10.55	11.10	IS-25	Yagnesh Shadangi	IIT Bhilai	An Insight into Phase Stability, Mechanical Properties, and Applications of Selected Refractory Complex Concentrated Alloys
11.10	11.35	IS-26	G.S Vinod kumar	SRM University	Mitigating solidification related defects in closed cell magnesium foam processed via liquid metal route.
11.35	11.50	IS-27	Mayur Vaidya	IIT Hyderabad	Interdiffusion driven phase growth during dissimilar welding in high entropy alloys
12.00	13.00	Lunch			
13.00	18.00	Sightseeing			
18.30	21.00	Banquet Dinner + Valedictory			
21.00	23.00	Return to IITH			

Day 4: December 8, 2026

			Speaker	Affiliation	Title of the Talk
09.00	10.35	Session 10: Chair:			
09.00	09.25	KN-22	C. Ravindran	Toronto Metropolitan University	Industry 5.0 in relation to Metal Casting and Foundry Processes
09.25	09.50	KN-23	A. Tewari	IIT Bombay	Two-Dimensional Topology Modelling of an Additively Deposited Layer
09.50	10.05	IS-28	Ashwin J. Shahani	Univ. of Michigan	Capturing the lifetime of Fe-rich intermetallics in real-time at the nanoscale
10.05	10.20	IS-29	Amarendra Kumar Singh	IIT Kanpur	Uncertainties in Predictive Modelling of Scrap Melting: Insights from Controlled Geometry and Collapse Experiments
10.20	10.35	IS-30	R. Barnwal	CSIR-CMERI	Industry 5.0 Framework for an Intelligent, Sustainable and Human-Centric Foundry Ecosystem
10.35	11.00	Tea/Coffee			
11.00	13.00	Session 11: Chair:			
11.00	11.25	KN-24	Mo Li	Georgia Institute of Technology	TBD
11.25	11.50	KN-25	A Sharma	MNIT Jaipur	Microstructure Evolution During Solidification, Grain Refinement, and Remelting: Thermodynamic and Kinetic Framework
11.50	12.15	KN-26	Mihai Stoica	ETH Zürich, Metallphysik und Technologie	Unveiling thermal expansion pathways of Fe-based bulk metallic glasses through time-resolved synchrotron studies
12.15	12.30	IS-31	S Shankar	Mc Master University	Heat Transport and Microstructure Evolution during solidification of Al alloys in water cooled metal mould castings.
12.30	12.45	IS-32	Arvind Kumar	IIT Kanpur	Elucidating Rapid Solidification and Defect Formation in Pulsed Laser Powder Bed Fusion Process

12.45	13.00	IS-33	Shyamprasad Karagadde	IIT Bombay	Compositional heterogeneity during multi-material additive manufacturing
13.00	13.15	IS-34	Junpei Okada	Tohoku University, Japan	A First-Order Phase Transition from Liquid Al–Si to Eutectic Al–Amorphous Si by Melt Spinning
13.15	14.00	Lunch			
14.00	15.35	Session 12: Chair:			
14.00	14.25	KN-27	G D Janakiram	IIT Hyderabad	Analysis of cracking in electron beam powder-bed fusion processed nickel-base superalloy CM247LC
14.25	14.50	KN-28	Krishanu Biswas	IIT Kanpur	Thoughts on How Metallic Particles Melt
14.50	15.05	IS-35	E Liotti	Oxford University	Investigating the solidification of ‘dirty’ recycled aluminium alloys with X- ray radiography and artificial intelligence
15.05	15.20	IS-36	Suman Sarkar	IIT Jammu	Concurrent Ordering and Incommensurate Modulation: A Re-Evaluation of the Co-Cu Binary Miscibility Gap and Associated Phase Equilibrium
15.20	15.35	IS-37	Sai Ram Krishna Malladi	IIT Hyderabad	Visualising Nanoscale Phase Transformations by In situ Transmission Electron Microscopy: Examples from Heating of Thin Films and Crystallisation in Liquid Cells
15.35	15.50	IS-38	Devender Singh	University of Delhi	Phase Separation in Metallic Glasses: Microstructure and Properties
15.50	16.15	Tea/Coffee			
End					